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ABSTRACT

This study examined the relationship between moral reasoning and altruistic behavior in 120 boys, 4- to 11-years old. Subjects were administered Damon's Positive- Justice Interview, and were presented helping and sharing tasks under five behavioral conditions corresponding to Damon's justice levels. Findings supported cognitive- developmental theory, demonstrating that different patterns of altruistic behavior emerge at different levels of social-cognitive maturity. In addition, it was demonstrated that certain types of moral reasoning are highly consistent with moral behavior. Moral reasoning within a practical altruistic context was more closely related to altruistic behavior than was moral reasoning within a hypothetical context. (Author/RH)

Developmental Consistencies in Children's Socio-Moral Knowledge: Justice Reasoning and Altruistic Behavior[1]

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An important issue in studies of moral development is the extent to which individuals are consistent in their behavior across different moral situations. Piaget's theory of cognitive development maintains that there are cognitive structures which determine the quality of thought. These structures, or organizing principles, represent patterns of thinking through which individuals structure and organize their social world, and they underlie both thought and action in a consistent manner.

Empirical research has not offered strong evidence of such consistency, however. Studies which have examined the relationship between moral judgment and behavior in young children have found low positive correlations. These studies have usually measured moral judgment with Piaget's (1965) stories or Kohlberg's (1969) dilemmas. Behavior has been assessed using various tasks. No relationship was found between resistance to temptation and moral reasoning using Piagetian stories of intentionality (Grinder, 1964), or using Kohlberg's moral judgment interview (Nelson, Grinder, and Biaggio, 1969), while Harris, Mussen, and Rutherford (1976) found a low positive correlation between resistance to temptation and Kohlberg's measure. Emler and Rushton (1976)

found moderate correlations between Piagetian stories of intentionality and sharing. Finally, Kohlberg's moral judgment measure was found to have little or no relationship to political activity (Haan, Smith, and Block, 1968; Leming, 1974).

There are a number of methodological problems in these studies which may have contributed to the low correlations. First, regarding the measures, as Damon (1977) has suggested, Kohlberg's stories do not provide an accurate assessment of young children's moral knowledge, since many of the issues depicted in the stories are far beyond the realm of children's experiences. Second, subjects' justifications for their social behavior are rarely obtained. Third, the behavioral measures usually consist of an isolated behavior, e.g., cheating on a test or donating to a charity. Few attempts have been made to consider the organizational patterns of behavior, or to determine qualitative differences in structural levels of moral behavior.

The present study was designed to examine the issue of consistency between moral reasoning and behavior, (i.e., hypothetical and practical knowledge). The relationship between hypothetical justice reasoning and two forms of altruistic behavior was studied. The relationship among cognitive structure, reasoning, and behavior was also explored. One dimension upon which children structure their social thinking and which changes qualitatively with development is reciprocity. The relationship between reciprocity and reasoning was measured by Damon's positive-justice interview. The relationship between reciprocity and altruistic behavior was measured by a series of environmental conditions designed to elicit reciprocity responses. These conditions were based on Damon's levels of positive justice. Each level is characterized by new, more sophisticated

understanding of the concept of reciprocity: Children at levels 0A and 0B are egocentric and have little or no understanding of reciprocity. Children at level 1A understand reciprocity as a rigid payback-in-kind; those at level 1B understand merit; and those at level 2A understand need. Children at level 2B understand and are able to coordinate the relationship among several claims to justice. In the present study, four behavioral conditions were developed to reflect the knowledge acquired at stages 1A, 1B, 2A, and 2B.

In each condition the subject was given information about another (fictitious) child, and he then had the opportunity to respond altruistically to that child. The reciprocity conditions were as follows:

(1) Past reciprocity. The other (fictitious) child had previously participated but did not win anything for himself. He did, however, leave something for the subject. The subject was then told he could leave something for that child in return. This corresponded to 1A reasoning.

(2) Deserving/merit. The subject was told that the other child had worked very hard and had done very well on a task, and he could give something to that child. This corresponded to 1B reasoning.

(3) Need. The subject was told that the other child is very poor, and he could give something to that child. This corresponded to 2A reasoning.

(4) Coordinated reciprocity. The child was given information about two other children: one who had worked very hard and had done very well on a task, and another who was very poor. The subject was then told he could give something to one or both of these children. This corresponded to 2B reasoning since it required the subjects to coordinate two separate claims to justice.

(5) Control. No additional information was given to the child.

These reciprocity conditions were embedded in two contexts of altruism: sharing candy and helping trace pictures. The relation between subjects' levels of justice reasoning and their altruistic behavior was observed in their responses to these conditions. In addition, children were asked to give reasons for their behavior (practical reasoning) in order to assess the relationship between levels of reasoning in hypothetical and practical contexts. Finally, subjects were asked what was the fairest thing to do in the helping and sharing situations (ideal reasoning) in order to extend the assessment of the relationship between levels of reasoning to an ideal context.

The present study was designed to test the following hypotheses:

1. Level of hypothetical moral reasoning will be positively related to the amount of helping and sharing behavior.

2. Interactions between hypothetical moral reasoning level and condition of altruism will be significant.

2A. Children at hypothetical moral reasoning level 0B will display a significantly lower frequency of helping and sharing in all conditions than those at moral reasoning levels 1B and 2B.

2B. Children at hypothetical moral reasoning level 1B will display a significantly higher frequency of helping and sharing in the past reciprocity and merit conditions than in the control condition.

2C. Children at hypothetical moral reasoning level 2B will display a higher frequency of helping and sharing behavior in the past reciprocity, merit, need, and coordinated reciprocity conditions than in the control condition.

3. Levels of hypothetical, practical, and ideal moral reasoning will be positively correlated.

4. Children will be more advanced in levels of hypothetical reasoning than in levels of practical or ideal reasoning.

METHOD

Subjects.

The sample consisted of 120 males from grades kindergarten through five, selected from a public school in New York City in a primarily middle-class neighborhood. Ages ranged from four to eleven years.

Procedures

Hypothetical Moral Reasoning.

Levels of moral reasoning in a hypothetical context were assessed using Damon's Positive Justice Interview (1977).

Contexts of Altruism.

Altruism was measured in two behavioral contexts; helping and sharing. Each subjects was administered both tasks in two separate sessions.

Helping. This task assessed children's helping under different conditions of reciprocity in order to observe (1) whether subjects helped another child on an uninteresting task while foregoing the opportunity to play with a more attractive toy, and (2) whether conditions of reciprocity reflecting different cognitive levels elicited differential responses by children.

The task was a tracing game. Subjects were invited to make spacemen by tracing several geometric shapes (squares, rectangles, triangles, and circles), cutting them out, and pasting them together.

The experimenter showed the materials to the subject and told him she would assemble another set of geometric tracing shapes which was on a table at the other end of the room. While the subject waited for his shapes to be prepared, he was given the choice of either playing with an attractive toy (Etch A Sketch) or tracing shapes for another boy who had to leave quickly and did not have the chance to trace any for himself. At this point, subjects were given additional information about the fictitious boy. There were four different types of information given to subjects (four conditions) which corresponded to different levels of reciprocity: past reciprocity (the other child had left tracings for the subject), merit (the other child was a good artist), need (the other boy was poor), and coordinated reciprocity (one other boy was a good artist and another was poor), plus a control group (no other information was given about the other child). Subjects were randomly assigned to one of these five conditions. The subject was then left alone to either trace or play with the other toy. The subject was asked the reasons for his behavior (practical reasoning). In order to assess ideal reasoning the subject was then asked what was the fairest thing to do.

The experimenter recorded the number of tracings a subject made for the fictitious child. The reasons he stated for his behavior and for the fairest thing to do were scored according to Damon's levels of positive justice ranging from 0A to 2B (1977).

Sharing. This measure assessed children's sharing under different conditions of reciprocity. The procedure was adapted from Dreman (1976). The subject was asked to draw a picture and was presented nine candies as a prize. This served as a pretext for giving the subject candies

to share with another (fictitious) child. He was then told that the other child had to leave quickly, and that he could leave some of his own candies for the child if he wanted. At this point, subjects were given additional information about the fictitious boy. There were four different types of information given to subjects (four conditions) which corresponded to different levels of reciprocity: past reciprocity (the other boy had left candies for the subject), merit (the other child was a good artist), need (the other boy was poor), coordinated reciprocity (one other boy was a good artist and another was poor), plus a control group (no other information was given about the other child). Subjects were randomly assigned to one of these five conditions. Several bags were placed near the subject who was told that he could leave candies in a bag for the other child if he wanted. It was emphasized that he could share as many or as few as he wanted. The subject was then left alone for two minutes, in order to minimize the demand characteristics of the situation. The subject was asked the reasons for his behavior (practical reasoning). In order to assess ideal reasoning, the subject was asked what was the fairest thing to do.

The experimenter recorded the number of candies a subject placed in a bag for the other child. The reason he stated for his behavior and for the fairest thing to do were scored according to Damon's levels of positive justice reasoning from 0A to 2B (1977).

Subjects were tested individually in two sessions, approximately one month apart. In the first session, subjects were administered a behavioral task by one experimenter. Half the subjects were administered the helping task first and half the sharing task. At the conclusion of the behavioral task the hypothetical positive-justice interview was administered by a

second experimenter. The experimenters continued to test subjects until there were approximately forty subjects at each of the following hypothetical moral reasoning levels: 0B, 1B, and 2B. Subjects at levels 0A, 1A, and 2A were not included. In the second session, subjects were administered the second behavioral task.

RESULTS

The effects of level of hypothetical moral reasoning and condition of altruism on helping and sharing behaviors were assessed by performing a 3 X 5 analysis of variance on the number of pictures subjects traced and the number of candies that they shared. There were three levels of hypothetical moral reasoning (0B, 1B and 2B) and five conditions of altruism (control, past reciprocity, merit, need, and coordinated reciprocity). There was a significant main effect for hypothetical moral reasoning levels on both the helping and sharing behaviors, $F(2, 105) = 13.26$ and 9.32, respective, $p < .05$. Scheffé comparisons indicated that for both helping and sharing, subjects at level 2B of the moral reasoning interview drew significantly more pictures and shared significantly more candies than subjects at levels 0B and 1B, while the latter groups did not differ from each other. These results are shown in Figures 1 and 2.

The same factors were entered into an analysis with age as a covariate. There was a significant effect for hypothetical moral reasoning level for helping and sharing, $F(2, 104) = 7.34$ and 5.64, respectively, $p < .05$. Scheffé comparisons showed that, for sharing, subjects at level 2B gave significantly more candies than subjects at levels 0B and 1B, while the latter groups did not differ from each other. Post hoc pairwise comparisons for helping responses, however, were not significant.

Although no specific predictions were made concerning the effect of condition of altruism on altruistic behavior, it was assessed as part of the above 2-way ANOVA. The analysis indicated that there was a significant main effect for condition on both helping and sharing responses, $F(4, 105) = 2.93$ and 2.73, respectively, $p < .05$. Scheffé post hoc comparisons showed that, for helping, subjects in the coordinated reciprocity condition traced more pictures than those in the control condition and subjects in the coordinated reciprocity condition traced more than those in the merit condition. For sharing, subjects in the coordinated reciprocity condition gave more candies than those in the control condition.

The interaction effect between hypothetical moral reasoning level and condition of altruism was not significant for sharing behaviors. The interaction effect for helping behaviors, however, was significant, $F(8, 102) = 2.68$, $p < .05$. Two types of post hoc comparisons were performed on the helping scores. The first was a comparison of subjects' altruistic behaviors at moral reasoning levels 0B to 1B and 1B to 2B at each condition of altruism. The second type of post hoc test compared the amounts of altruistic behaviors in the past reciprocity, merit, need, and coordinated reciprocity conditions against the control condition at each moral reasoning level. Scheffé comparisons revealed no significant differences. However, the Scheffé test is the most conservative of the post hoc tests. In order to further explore the trends in the data under less stringent criteria for significance, an additional post hoc test, Dunnett's t statistic (Winer, 1962) was performed. The Dunnett test is appropriate since it allows a comparison

of a set of cells to one particular cell (i.e., control group). Dunnett's test indicated a significant difference between number of pictures traced for subjects at levels 1B and 2B in both control and coordinated reciprocity conditions, $t = 7.06$ and 7.65, respectively, $p < .05$. Subjects at level 2B traced more pictures than those at level 1B in both control and coordinated reciprocity conditions. In addition, significant differences were found between the control and need conditions and between the control and coordinated reciprocity conditions at moral reasoning level 2B, $t = 10.11$ and 15.22, respectively, $p < .05$. Subjects at moral reasoning level 2B traced more pictures in the need and coordinated reciprocity conditions than in the control condition. These results are presented in Figures 3 and 4.

As previously described, three types of moral reasoning were obtained: hypothetical reasoning (based upon scores obtained on the positive justice interview), practical reasoning (based upon subject's justifications for his altruistic behavior), and ideal reasoning (based upon subject's descriptions of the fairest thing to do in the helping or sharing situation). Kendall's Tau rank order correlations were used to assess the interrelationships among the measures. Correlations among moral reasoning scores in the three different contexts are presented in Table 1.

The interrelationships among types of reasoning were assessed in the helping and sharing contexts separately. Correlations between hypothetical and practical reasoning scores were .39 in the helping context and .41 in the sharing context. Correlations between hypothetical and ideal reasoning scores were .40 for helping and .46 for sharing. Correlations between practical and ideal reasoning scores were .62 for helping and .83 for sharing.

In addition, correlations between behavioral contexts were assessed for both practical and ideal reasoning. In this assessment, practical reasoning scores were correlated across helping and sharing contexts, and, similarly, ideal reasoning scores were correlated across helping and sharing contexts. The correlation between practical reasoning scores in the helping and sharing contexts was .27, and the correlation between ideal reasoning scores in helping and sharing contexts was .36. All correlations were significant ($p < .001$).

Thus, there were significant positive relationships among the three types of reasoning. Although correlations varied between the helping and sharing contexts, similar patterns existed for both. The highest correlations were demonstrated between practical and ideal reasoning scores. Hypothetical reasoning was more highly correlated with ideal reasoning than with practical reasoning scores. Correlations between helping and sharing reasoning scores were the lowest.

In addition, partial correlations among reasoning scores were calculated with age as a covariate. These correlations are presented in Table 2. Although these correlations were somewhat lower than the simple correlations, they all remained significant and displayed the same patterns as the zero-order correlations.

An additional analysis was employed to determine whether subjects' levels of moral reasoning were equivalent across hypothetical, practical, and ideal reasoning contexts. Chi square analyses were performed in each behavioral context (helping and sharing) to test

whether there were differences in patterns of reasoning at each moral reasoning level. Each analysis compared two types of reasoning. For example, one chi square test compared levels of hypothetical and practical reasoning. A 3 x 3 frequency table was constructed to include three patterns of reasoning (hypothetical more advanced than, equivalent to, less advanced than practical reasoning) by three hypothetical reasoning levels (0B, 1B, 2B). In this way, patterns of reasoning could be compared at different moral-cognitive levels. This analysis was performed in both helping and sharing contexts. Similarly, frequency tables were constructed to compare hypothetical and ideal reasoning, and practical and ideal reasoning. Thus, six separate chi square analyses were performed.

For both helping and sharing contexts of altruism, there were significant differences in patterns of hypothetical and practical reasoning, $X^2(4) = 10.35$, $p < .04$ and $X^2(4) = 12.34$, $p < .02$, respectively. Subjects' moral reasoning was at least one level lower in the practical context than in the hypothetical context. For both helping and sharing, there were significant differences in the pattern of hypothetical and ideal reasoning, $X^2(4) = 39.56$ and 39.01, respectively, $p < .001$. On both tasks, subjects in hypothetical moral reasoning level 0B reasoned at equivalent levels in hypothetical and ideal reasoning, whereas subjects at levels 1B and 2B were more advanced in hypothetical than in ideal reasoning. Finally, in both helping and sharing contexts, there were no significant differences between practical and ideal reasoning.

DISCUSSION

Most theories of children's moral reasoning (Piaget, 1965, Kohlberg, 1969) are based on children's responses to hypothetical moral dilemmas with little concern regarding how responses in such hypothetical contexts are related to moral judgments and moral actions in practical contexts. Piaget, in his studies of moral judgment, acknowledged the differences between "verbal or theoretical judgment and the concrete evaluations that operate in action..." (1965, p. 117) and he cautioned readers that the "verbal evaluations made by our children are not of actions of which they have been authors or witnesses, but of stories which are told to them" (p. 119). Recently, Damon (1977) tested children's concepts of distributive justice in both hypothetical and practical contexts. For the practical context he created experimental conditions in which groups of children actually had to decide how to distribute "rewards" among themselves. Children's justifications for their behavior was analyzed according to whether they considered such justice principles as need or merit. Among other things, he found that children resorted to higher levels of justice reasoning when considering the hypothetical situations than when engaging in practical judgments. The overall relationship between justice reasoning in the hypothetical and practical contexts was less than what would be expected from cognitive developmental theory.

The purpose of the present study was to provide a more sensitive test of the consistency of moral reasoning in hypothetical and practical contexts and the relationship between moral reasoning and altruistic behavior.

Two different situations of altruism were studied: helping and sharing. Within each situation, four experimental conditions were created to correspond to Damon's levels of moral reasoning: past reciprocity, merit, need, and coordinated reciprocity. In addition, three different measures of moral reasoning were obtained: hypothetical, practical, and ideal. Thus, by systematically varying these factors within a coherent theoretical framework, more specific interactions between levels of reasoning and altruistic behavior could be delineated.

It was found that relationships between moral reasoning contexts and altruistic behavior differed according to subjects' levels of hypothetical moral reasoning. Subjects at level 2B showed significantly greater helping and sharing behaviors across all conditions than subjects at 1B and 0B. Subjects at 1B, however, were not more altruistic than subjects at 0B.

When subjects' responses in the four experimental conditions were compared with the control condition, it was found that subjects at level 2B make greater efforts to help another (fictitious) child in the need and coordinated reciprocity conditions but not in the merit and past reciprocity conditions. Subjects at level 2B, did not share significantly more candies with another child in any of the four experimental conditions compared to the control condition. Helping and sharing responses of subjects at levels 1B and 0B did not differ from the control condition in any of the four experimental conditions. The behavioral responses of subjects at 2B and 1B is particularly surprising in that these subjects recognized the claims of merit and past reciprocity in their hypothetical reasoning but not in their practical action.

In general, the present findings showed that children's hypothetical reasoning was consistent with their practical action for subjects at level 2B who were the only ones expected to act on another child's claims of need and coordinated reciprocity, and for subjects at level 0B who were not expected to respond in any of the conditions differently than in the control condition. The practical action of subjects at level 1B was not consistent with their hypothetical reasoning. Subjects at level 1B were expected to act on claims of merit but in fact their actions were no different than subjects at the lowest level of hypothetical justice reasoning. Damon (1977) also found that subjects who reasoned hypothetically at level 1B did not behave accordingly. It appears that it is not until subjects reach the level of 2B that their hypothetical reasoning shows some consistency with their practical moral behavior.

Another concern in the present study was the relationship among three different contexts of moral reasoning. While other studies have compared moral reasoning in hypothetical and practical contexts (Damon, 1977; Haan, 1975), the present study used an additional context: ideal (i.e., subjects' judgments of the "fairest" thing to do in a given behavioral condition). Similar to Damon (1977) and Haan (1975) the present study found that subjects reasoned at more advanced levels in the hypothetical than in either the practical or ideal contexts. There were no differences between levels of ideal and practical reasoning.

The highest correlations among forms of moral reasoning were between practical and ideal reasoning. In addition, hypothetical reasoning was more highly correlated with ideal reasoning than with practical reasoning. Also, correlations between practical reasoning

and altruistic behavior were higher than between hypothetical reasoning and altruistic behavior.

Thus, measures of moral reasoning and behavior within a practical context were more closely related than those between hypothetical and practical contexts. This finding is consistent with Daumrind's (1978) position that practical reasoning is a better predictor of moral behavior than hypothetical reasoning, as the latter excludes the subjective and affective interests of the actor in a moral dilemma. In contrast to previous studies that have compared hypothetical reasoning in one content domain and social behavior in a totally different content domain and did not find strong relationships (Grinder, 1964; Nelson et al, 1969; Harris et al., 1976; Emler & Rushton, 1976; Leming, 1974), the present study found that children's practical reasoning was consistent with their altruistic behavior within the same content domain.

The present findings are consistent with previous studies reporting higher levels of moral reasoning in the hypothetical compared to practical contexts. Within the domain of moral reasoning, it thus appears to be a consistent bias toward lower levels of reasoning in the practical context due to the inherent conflict between one's own self interest and moral principles. In other contexts (e.g., interpersonal persuasion), however, the self interests that operate in practical contexts can enhance social reasoning (Bearison and Gass, 1979).

The present study supports the need for further social cognitive research regarding children's cognitive reasoning about their own behavior instead of their reasoning about hypothetical people engaging in hypothetical social acts.

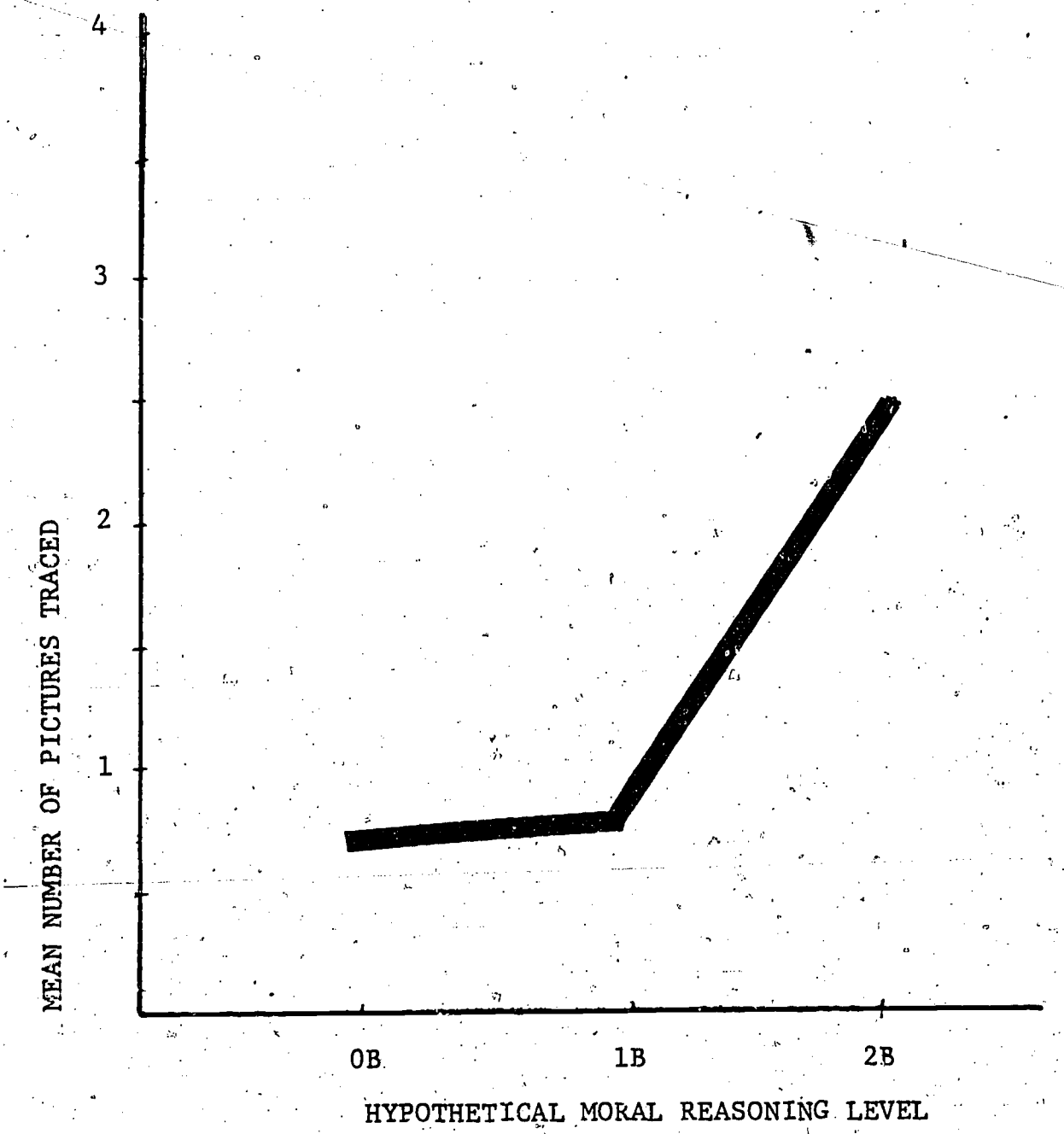

Figure 1. Mean number of pictures traced in the helping context as a function of hypothetical moral reasoning level.

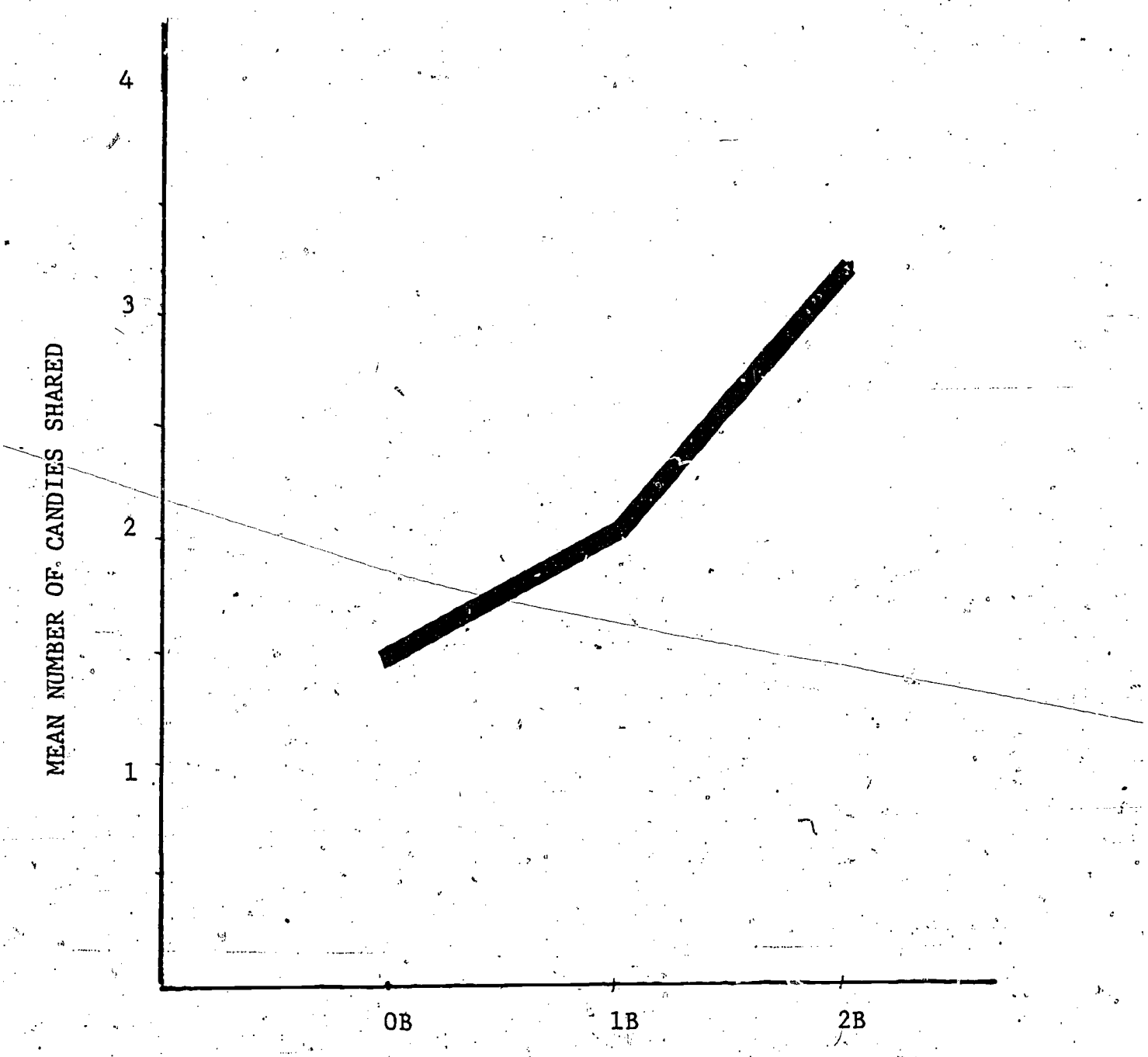

Figure 2. Mean number of candies shared in the sharing context as a function of hypothetical moral reasoning level.

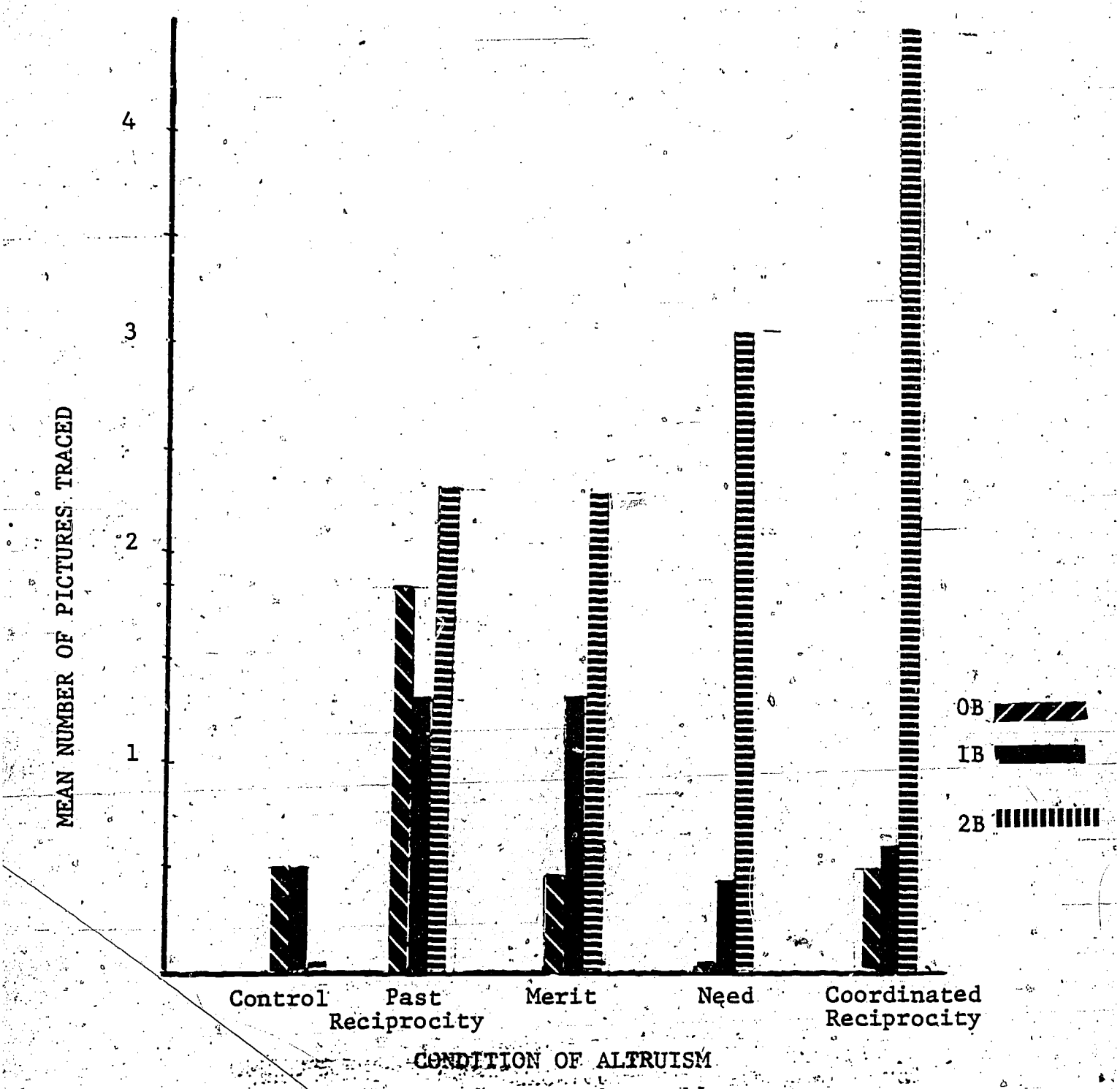

Figure 3. Mean number of pictures traced in the helping context as a function of hypothetical moral reasoning level and condition of altruism.

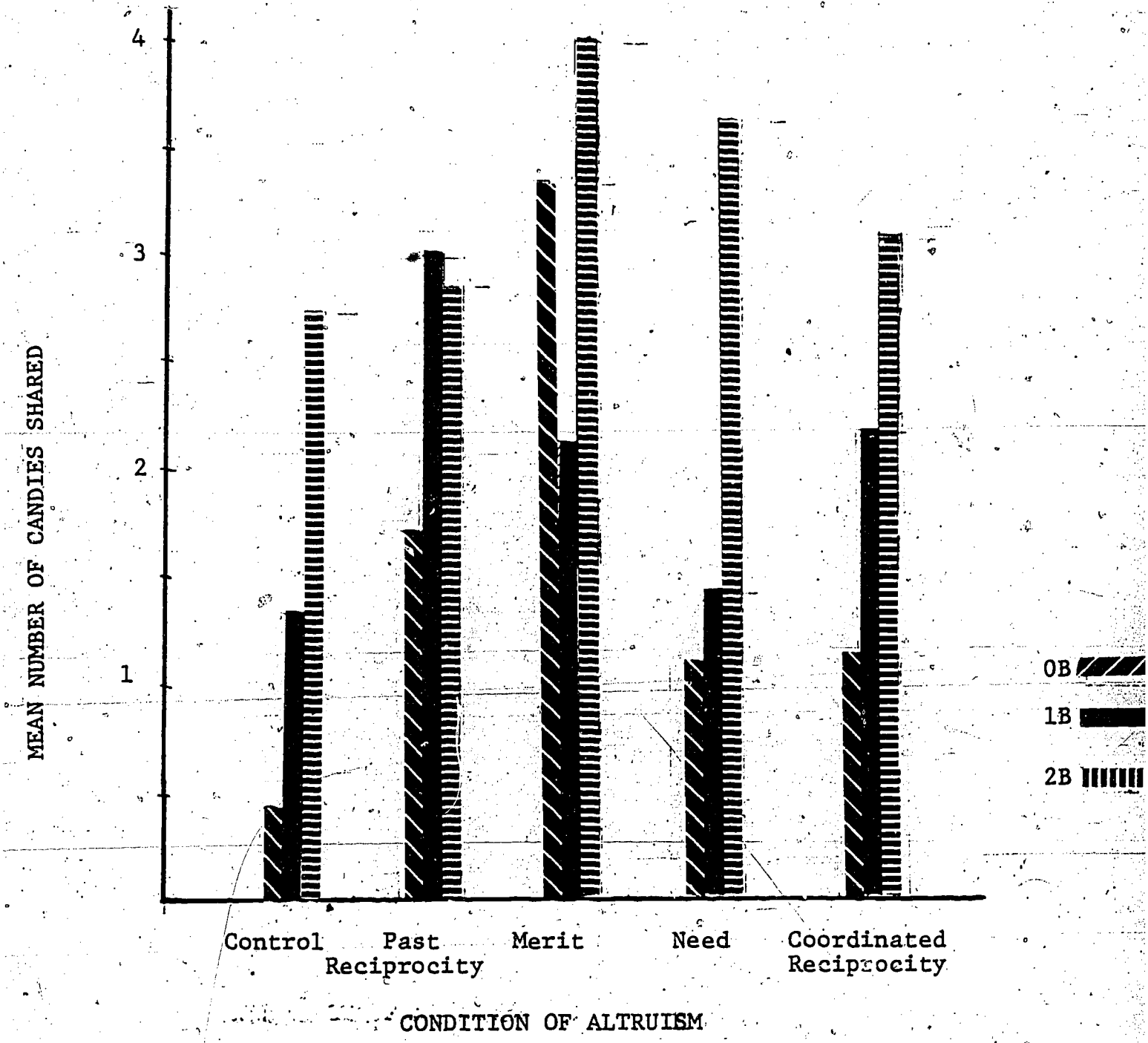

Figure 4. Mean number of candies shared in the sharing context as a function of hypothetical moral reasoning level and condition of altruism.

Table 1

Correlations among Reasoning Scores

Measures	1	2	3	4	5	6
Hypothetical Moral Reasoning (1)		.39**	.40**	.41**	.46**	.73**
Helping						
Practical Reasoning (2)			.62**	.27**	...	.27**
Ideal Reasoning (3)				...	.36**	.24**
Sharing						
Practical Reasoning (4)					.83**	.38**
Ideal Reasoning (5)						.38**
Age (6)						

* $p < .01$.

** $p < .001$.

Table 2

Partial Correlations among Reasoning Scores

Measures	1	2	3	4	5
Hypothetical Moral Reasoning (1)		.29**	.40**	.21*	.30**
Helping					
Practical Reasoning (2)			.59**	.19*	...
Ideal Reasoning (3)				...	.30**
Sharing					
Practical Reasoning (4)					.80**
Ideal Reasoning (5)					

* $p < .01$.

** $p < .001$.

Note: The partial correlations are first-order correlations with age as the covariate.

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